

Listing of Claims:

Claim 1 (Currently Amended): A method of operating a robot cleaner with a processor comprising:

selecting a floor type mode using an on-board microprocessor, the floor type modes including a hard surface mode and a soft surface mode, operation in the soft surface mode including rotating a sweeper of the robot cleaner more than in the hard surface mode; and cleaning with the robot cleaner in the selected floor type mode.

Claim 2 (Original): The method of claim 1, wherein the hard surface mode the sweeper is off.

Claim 3 (Original): The method of claim 1, wherein in the hard surface mode, the sweeper has a reduced speed.

Claim 4 (Original): The method of claim 1, wherein the soft surface mode is a carpet cleaning mode.

Claim 5 (Original): The method of claim 1, wherein selecting the floor type mode is done by pressing a button on the robot cleaner.

Claim 6 (Original): The method of claim 1, wherein a remote unit is used to select between the floor type modes.

Claim 7 (Original): The method of claim 1, wherein a floor sensor is used to select between the floor type modes.

Claim 8 (Currently Amended): A robot cleaner comprising:
a cleaning unit on the robot cleaner, cleaning unit including a sweeper;
an on-board processor to control the robot cleaner into a selected floor type mode, the floor type modes including a hard surface mode and a soft surface mode, operation in the soft surface mode including rotating a sweeper of the robot cleaner more than in the hard surface mode.

Claim 9 (Original): The robot cleaner of claim 8, wherein the hard surface mode the sweeper is off.

Claim 10 (Original): The robot cleaner of claim 8, wherein in the hard surface mode, the sweeper has a reduced speed.

Claim 11 (Original): The robot cleaner of claim 8, wherein the soft surface mode is a carpet cleaning mode.

Claim 12 (Original): The robot cleaner of claim 8, wherein selecting the floor type mode is done by pressing a button on the robot cleaner.

Claim 13 (Original): The robot cleaner of claim 8, wherein a remote unit is used to select between the floor type modes.

Claim 14 (Previously presented): The robot cleaner of claim 8, wherein a floor sensor is used to select between the floor type modes.

Claim 15 (Currently Amended): A method of using a robot cleaner comprising:
providing a robot cleaner having a cleaning unit that includes an on-board processor to control the robot cleaner in a selected floor type cleaning mode, the floor type cleaning modes including a hard surface mode and a soft surface mode.

using the robot cleaner to clean a room, the robot cleaner moving under its own control;
attaching a supplemental cleaning element to the robot cleaner; and
carrying the robot cleaner and using the supplemental cleaning element to clean an object.

Claim 16 (Original): The method of claim 15, wherein the supplemental cleaning unit connects to a connection port.

Claim 17 (Original): The method of claim 16, wherein the connection port is on top of the robot cleaner.

Claim 18 (Original): The method of claim 16, wherein the connection port is on the bottom of the robot cleaner.

Claim 19 (Original): The method of claim 18, wherein the connection port is adjacent to a vacuum inlet.

Claim 20 (Original): The method of claim 15, wherein the robot cleaner cleans in a serpentine pattern under its own control.

Claim 21 (Original): The method of claim 15, wherein the robot cleaner has a handle.

Claim 22 (Original): The method of claim 21, wherein the handle is part of the edge of the robot cleaner.

Claim 23 (Original): The method of claim 15, wherein the supplemental cleaning element is a hose attachment.

Claim 24 (Original): The method of claim 15, wherein the supplemental cleaning element includes a brush.

Claim 25 (Original): The method of claim 15, wherein the supplemental cleaning element includes a nozzle.

Claim 26 (Original): The method of claim 15, wherein the supplemental cleaning element includes a crevice tool.

Claim 27 (Currently Amended): A robot cleaner comprising:

a cleaning unit;

a motion unit;

an on-board processor to use the cleaning unit and motion unit to clean a room under the control of processing, wherein the processor is configured to control the robot cleaner in a selected floor type cleaning mode including a hard surface mode and a soft surface mode; and

a connection port for supplemental cleaning element, wherein, when the supplemental cleaning element is attached, the robot cleaner can be carried to clean an object.

Claim 28 (Original): The robot cleaner of claim 27, wherein the connection port is on top of the robot cleaner.

Claim 29 (Original): The robot cleaner of claim 28, wherein the connection port is on the bottom of the robot cleaner.

Claim 30 (Original): The robot cleaner of claim 29, wherein the connection port is adjacent to a vacuum inlet.

Claim 31 (Original): The robot cleaner of claim 27, wherein the robot cleaner cleans in a serpentine pattern under its own control.

Claim 32 (Original): The robot cleaner of claim 27, wherein the robot cleaner has a handle.

Claim 33 (Original): The robot cleaner of claim 32, wherein the handle is part of the edge of the robot cleaner.

Claim 34 (Original): The robot cleaner of claim 27, wherein the supplemental cleaning element is a hose attachment.

Claim 35 (Original): The robot cleaner of claim 28, wherein the supplemental cleaning element includes a brush.

Claim 36 (Original): The robot cleaner of claim 27, wherein the supplemental cleaning element includes a nozzle.

Claim 37 (Original): The robot cleaner of claim 27, wherein the supplemental cleaning element includes a crevice tool.